The information categorizing process steps in the third embodiment of the present invention are discussed, referring to a specific example.

IN THE CLAIMS:

Please substitute the following clean amended claims 1-30 for the pending claims of the same number. Marked-up versions of the amended claims follow the Remarks section of this Amendment.

1. (Amended) An information categorizing method comprising a step of acquiring, through a clustering module, a plurality of search results searched by a search service, a step of performing, through the clustering module, a clustering process on the search results, and outputting the clustering result from the clustering module.

2. (Amended) An information categorizing method according to claim 1, further comprising a step of converting, through a converter module, the search result searched by the search service into a format that is processed by the clustering module.

3. (Amended) An information categorizing method according to claim 2, wherein the converter module is arranged correspondingly to each of a plurality of search services when the clustering process is performed correspondingly to the plurality of search services.

4. (Amended) An information categorizing method according to claim 3, wherein a search process is performed using one search service selected from the plurality of search services and the clustering process is performed on the search result searched by the selected search service.

5. (Amended) An information categorizing method according to claim 3, wherein search processes are performed in parallel using at least two search services of the plurality of search services, respective search results are collected, and the clustering process is performed on the collected search results.

6. (Amended) An information categorizing method according to claim 3, wherein search processes are performed in parallel using at least two search services of

the plurality of search services, and the clustering process is individually performed on the search results.

7. (Twice Amended) An information categorizing method according to claim 1, wherein when the clustering process is performed on the search result, information to be clustered is at least one of the title of a document, a URL address, an update date, and a file size of an individual search result.

8. (Amended) An information categorizing method according to claim 1, wherein the order of cluster of the clustering result is rearranged using a score indicating the degree of match between the clustering result and a search request for each document and the clustering result with the cluster order thereof rearranged is then output.

9. (Amended) An information categorizing method according to claim 8, wherein the rearranging process of the cluster order comprises a step of calculating the average of scores of the documents contained in each cluster to treat the average of each cluster as a cluster score, and a step of rearranging the cluster order using the cluster scores.

10. (Amended) An information categorizing method according to claim 8, wherein the rearranging process of the cluster order comprises a step of determining the maximum value of the scores of the documents in each cluster to treat the maximum score of each cluster as the cluster score, and a step of rearranging the cluster order using the cluster scores.

11. (Amended) An information categorizing method according to claim 8, wherein the rearranging process of the cluster order comprises a step of determining a score at a midway point or a substantially midway point in each cluster when the documents contained in each cluster are arranged in the order of magnitude of scores assigned thereto, to treat the score at the midway point or the substantially midway point as the cluster score, and a step of rearranging the cluster order using the cluster scores.

12. (Twice Amended) An information categorizing method according to claim 9, wherein the cluster score determining step for rearranging the cluster order is individually performed correspondingly to the plurality of search services when the clustering process is performed correspondingly to the search results provided by the plurality of search services.

13. (Twice Amended) An information categorizing method according to claim 8, wherein the clustering process is performed based on a feature, and wherein the title of each document is detected and a word characteristic of and contained in the title is extracted as the feature.

14. (Twice Amended) An information categorizing method according to claim 8, wherein the manner of outputting the clustering result with the cluster order rearranged comprises displaying the clusters in the order of the magnitude of scores from a high score to a low score and wherein when there are clusters having the same cluster score, one of the clusters having a larger number of documents therewithin is positioned higher in the cluster order.

15. (Amended) An information categorizing method according to claim 1, comprising a step of generating a clustering result summary table indicating the summary of the clustering results based on the clustering result, and a step of outputting the clustering result summary table together with the clustering result.

16. (Amended) An information categorizing method according to claim 15, wherein the clustering result summary table includes a cluster name of each cluster which is obtained through the clustering process.

17. (Amended) An information categorizing method according to claim 16, wherein the clustering result is mutually linked with the clustering result summary table, wherein when a cluster name portion of the clustering result summary table is designated, the corresponding cluster portion of the clustering result is displayed, and wherein when one cluster portion of a clustering result is designated, the clustering result summary table is displayed.

18. (Amended) An information categorizing method according to claim 17, wherein when a cluster name portion of the clustering result summary table is designated to display the corresponding cluster portion of the clustering result, the head portion of an outline surrounding the cluster or the last line in the outline of the cluster present immediately prior to the first cluster is displayed on the top of a screen.

19. (Amended) An information categorizing method according to claim 18, wherein when the one cluster portion of the clustering result is designated to display the clustering result summary table, the clustering result summary table is displayed with the head portion thereof appearing first on the screen.

20. (Twice Amended) An information categorizing method according to claim 16, wherein the arrangement order of clusters forming the clustering result summary table agrees with the arrangement order of the clusters in the clustering result.

21. (Twice Amended) An information categorizing method according to claim 16, wherein when the clustering result summary table is displayed, the manner of displaying the cluster names is changed in the clustering result summary table depending on the importance of each cluster in response to the clustering result.

22. (Twice Amended) An information categorizing method according to claim 16, wherein when a plurality of documents to be clustered are the ones which have been searched using a keyword input by a user, the manner of displaying the cluster names containing the keyword input by the user is different in the clustering result summary table from the other cluster names.

23. (Amended) An information categorizing apparatus comprising a clustering module for acquiring a plurality of search results searched by a search service, performing a clustering process on the search results, and outputting the clustering result.

24. (Amended) An information categorizing apparatus according to claim 23, further comprising a converter module for converting the search result searched by the search service into a format that is processed by the clustering module.

25. (Amended) An information categorizing apparatus according to claim 23, further comprises a cluster order setting module which rearranges the order of cluster of the clustering result using a score indicating the degree of match between the clustering result and a search request for each document and outputs the clustering result with the cluster order thereof rearranged.

26. (Amended) An information categorizing apparatus according to claim 23, further comprises a summary table generator unit for generating a clustering result summary table indicating the summary of the clustering results based on the clustering result, and

a display control unit for outputting the clustering result summary table together with the clustering result.

27. (Amended) A storage medium storing an information categorizing software program in which a clustering module performs a clustering process on a plurality of search results that have been searched by a search service in response to a search request of a user, and outputs the clustering result, the information categorizing software program comprising:

a step of acquiring the search result from the search service, and

a step of performing the clustering process on the acquired search result and a step of outputting the clustering result.

28. (Amended) A storage medium storing an information categorizing software program according to claim 27, wherein the step of performing the clustering process is performed subsequent to a step of converting the search result searched by the search service into a format that is processed by the clustering module.

29. (Amended) A storage medium storing an information categorizing software program according to claim 27, comprising a step of rearranging the order of cluster of the clustering result using a score indicating the degree of match between the clustering result and a search request for each document and a step of outputting the clustering result with the cluster order thereof rearranged.

30. (Amended) A storage medium storing an information categorizing software program according to claim 27, comprising a step of generating a clustering result summary table indicating the summary of the clustering results based on the clustering result, and

a step of outputting the clustering result summary table together with the clustering result.

Please add the following new claims:

--31. (New) A method for categorizing digital information, comprising the steps of:

acquiring at least one group of a plurality of digital items from at least one search of a database or network;

extracting from each item in at least one group of a plurality of digital items selected cluster-indexing information comprising at least one of title, URL address, update date, and file size;

clustering the plurality of digital items in at least one group according to each of the selected cluster-indexing information; and

outputting each cluster of digital items as a cluster result.

32. (New) The method according to claim 31, further comprising converting each of the acquired digital items into a common format before performing the clustering.

33. (New) The method according to claim 31, wherein the at least one group of a plurality of digital items is acquired by selecting only one such group from a

plurality of groups, each group being the result of an independent search, and wherein the clustering is performed on the selected one group.

34. (New) The method according to claim 31, wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering is performed on the collective search results.

35. (New) The method according to claim 31, wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering is individually performed on the search results.

B/B1 C1 cont

36. (New) The method according to claim 31, wherein, when a plurality of clusters are formed, the clustering comprises rearranging the order of the clusters based on individual cluster scores, each of which indicates the degree of match between the digital items in that cluster and a corresponding search query, and wherein the outputting comprises outputting the clusters in their rearranged order.

37. (New) The method according to claim 36, wherein the rearranging comprises calculating a value for each digital item in each cluster indicating the degree of match between that item and the corresponding search query, and calculating for each cluster the average of the values of each digital item in that cluster to generate the score for that cluster, and rearranging the cluster order using the cluster scores.

38. (New) The method according to claim 36, wherein the rearranging comprises calculating a value for each digital item in each cluster indicating the degree of match between that item and the corresponding search query, determining the maximum value in each cluster, assigning the maximum value of each cluster as the score for that cluster, and rearranging the cluster order using the cluster scores.

39. (New) The method according to claim 36, wherein the rearranging comprises calculating a value for each digital item in each cluster indicating the degree of match between that item and the corresponding search query, determining the middle or substantially middle value in magnitude in each cluster, assigning the middle or substantially middle value in each cluster as the score for that cluster, and rearranging the cluster order using the cluster scores.

40. (New) The method according to claim 36, wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering and the rearranging of cluster order is individually performed on the search results.

B/B1 C cont

41. (New) The method according to claim 31, wherein the title of each digital item in at least one group of a plurality of digital items is extracted, each title being defined by selected characters in the corresponding digital item, the selected characters being identified by one of location, size and a fixed number of words in from a designated beginning of the digital item, and wherein the identified selected characters are extracted and clustering is performed based on the selected characters extracted.

42. (New) The method according to claim 36, wherein the outputting of the clusters in rearranged order comprises displaying the clusters in the order of score magnitude from a high score to a low score, with clusters having the same score being displayed in the order of item number from a larger number to a smaller number.

43. (New) The method according to claim 31, wherein the clustering comprises generating a clustering result summary table summarizing the clustering result, and wherein the outputting comprises outputting the clustering result summary table together with the cluster result.

44. (New) The method according to claim 43, wherein the clustering result summary table includes a cluster name of each cluster which is obtained through the clustering.

45. (New) The method according to claim 44, wherein the cluster result is mutually linked with the clustering result summary table, wherein, when a cluster name portion of the clustering result summary table is designated, the corresponding portion of the cluster result is displayed, and wherein when one portion of a cluster result is designated, the clustering result summary table is displayed.

B1 C1 cont

46. (New) The method according to claim 43, wherein when the clustering result summary table is displayed, the manner of displaying the cluster names in the clustering result summary table is based on the importance of each cluster in response to the cluster result.

47. (New) An information categorizing apparatus comprising:

a clustering module configured to

acquire at least one group of a plurality of digital items from at least one search of a database or network,

extract from each item in at least one group of a plurality of digital items selected cluster-indexing information comprising at least one of title, URL address, update date, and file size,

cluster the plurality of digital items in at least one group according to each of the selected cluster-indexing information, and

output each cluster of digital items as a cluster result.

48. (New) An information categorizing apparatus according to claim 47, further comprising:

a converter module that converts each of the acquired digital items into a common format that is processed by the clustering module.

49. (New) An information categorizing apparatus according to claim 47, further comprising:

a cluster order setting module configured to

rearranging, when a plurality of clusters are formed, the order of the clusters based on individual cluster scores, each of which indicates the degree of match between the digital items in that cluster and a corresponding search query, and

wherein the clustering module outputs the clusters in their rearranged order.

50. (New) An information categorizing apparatus according to claim 47, further comprising:

a summary table generator unit for generating a clustering result summary table summarizes the clustering result; and

a display control unit for outputting the clustering result summary table together with the clustering result.

51. (New) A device-readable medium containing a program of instructions for categorizing digital information, the program of instructions comprising instructions for:

acquiring at least one group of a plurality of digital items from at least one search of a database or network;

extracting from each item in at least one group of a plurality of digital items selected cluster-indexing information comprising at least one of title, URL address, update date, and file size;

clustering the plurality of digital items in at least one group according to each of the selected cluster-indexing information; and

outputting each cluster of digital items as a cluster result.

52. (New) The device-readable medium according to claim 51, further comprising converting each of the acquired digital items into a common format before performing the clustering.

53. (New) The device-readable medium according to claim 51, wherein the at least one group of a plurality of digital items is acquired by selecting only one such group from a plurality of groups, each group being the result of an independent search, and wherein the clustering is performed on the selected one group.

B/ 1B/ C/ cont

54. (New) The device-readable medium according to claim 51, wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering is performed on the collective search results.

55. (New) The device-readable medium according to claim 51, wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering is individually performed on the search results.

56. (New) The device-readable medium according to claim 51, wherein, when a plurality of clusters are formed, the clustering comprises rearranging the order of the clusters based on individual cluster scores, each of which indicates the degree of match between the digital items in that cluster and a corresponding search query, and wherein the outputting comprises outputting the clusters in their rearranged order.

57. (New) The device-readable medium according to claim 56, wherein the rearranging comprises calculating a value for each digital item in each cluster indicating the degree of match between that item and the corresponding search query, and calculating for each cluster the average of the values of each digital

item in that cluster to generate the score for that cluster, and rearranging the cluster order using the cluster scores.

58. (New) The device-readable medium according to claim 56, wherein the rearranging comprises calculating a value for each digital item in each cluster indicating the degree of match between that item and the corresponding search query, determining the maximum value in each cluster, assigning the maximum value of each cluster as the score for that cluster, and rearranging the cluster order using the cluster scores.

59. (New) The device-readable medium according to claim 56, wherein the rearranging comprises calculating a value for each digital item in each cluster indicating the degree of match between that item and the corresponding search query, determining the middle or substantially middle value in magnitude in each cluster, assigning the middle or substantially middle value in each cluster as the score for that cluster, and rearranging the cluster order using the cluster scores.

60. (New) The device-readable medium according to claim 56, wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering and the rearranging of cluster order is individually performed on the search results.

61. (New) The device-readable medium according to claim 51, wherein the title of each digital item in at least one group of a plurality of digital items is extracted, each title being defined by selected characters in the corresponding digital item, the selected characters being identified by one of location, size and a fixed number of words in from a designated beginning of the digital item, and wherein the identified selected characters are extracted and clustering is performed based on the selected characters extracted.

62. (New) The device-readable medium according to claim 56, wherein the outputting of the clusters in rearranged order comprises displaying the clusters